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SUMMARY

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TECHNICAL AND ECONOMIC FACTORS IN THE CHOICE OF STEEL PLANT LOCATION

By R. B. ELVER,
T. H. JANES
and J. H. WALSH
Department of Mines
and Technical Surveys,
Ottawa, Canada

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TECHNICAL AND ECONOMIC FACTORS IN THE CHOICE OF STEEL PLANT LOCATION

by

R. B. Elver[1], T. H. Janes[2] and J. H. Walsh[3]
Department of Mines and Technical Surveys
Ottawa, Canada

SUMMARY

1) An economically sound primary steel industry is well recognized as a desirable entity when considering the economic growth potential of a particular region or country. In this paper, attention is given to general and specific considerations required in determining the merits for possible steel plant locations. Factors affecting the location and development of the Canadian industry are reviewed.

2) When an evaluation of steel plant location within an area is made, consideration should be given to raw materials, iron- and steel-producing processes, steel rolling mill facilities and markets. Of importance, also, is the mode and cost of transporting raw materials and finished steel products. An efficient handling and transportation system, besides its importance to other sectors of a country's economy, could be the difference between economic success or failure because transportation is one of the largest cost items in the price of both raw materials and finished steel products.

3) Rather than select a particular resource and estimate the costs of processing and transporting steel products, a locational study for a steel plant should be market-oriented. Ore and energy resources are readily available in the world market and advances in iron and steel technology might warrant consideration of processes not entirely dependent on coking coal. The market should be defined in terms of size, nature and type of steel products consumed. An analysis should be made of future population, migration flows, purchasing power and purchasing habits Anticipated growth or establishment of new secondary manufacturing industries will, of course, affect the market pattern. Once the market pattern of present and future steel consumption has been evaluated, it will be possible to estimate the size and types of rolling mill equipment that might be installed. Following this, the size and nature of the iron and crude steel producing facilities can be tentatively agreed upon.

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(1) Mineral Economist, Mineral Resources Division.
(2) Senior Mineral Economist, Mineral Resources Division.
(3) Senior Metallurgist, Fuels and Mining Practice Division, Mines Branch.

4) At this point, a preliminary review will suggest several possible steel plant locations. In the selection of possible locations for detailed study, the following situations would probably be included: - tidewater, inland water, market and major resource. For each location considered, calculations should be made of total steel ingot costs for various sizes and types of plants using various raw material and process combinations. Steel rolling mill costs for each main type of product being considered would also be estimated.

5) As a separate but integral part of a location study, a weighted transportation cost of moving all steel products to the anticipated market areas from each possible plant location should be made. By combining and comparing the various cost data, an evaluation of various hypothetical locations will indicate which one can best serve the anticipated market area. The raw material requirements, either imported or domestic, and the size and type of processing equipment best suited to the situation would be indicated.

6) The Canadian iron and steel industry has grown and diversified satisfactorily in close proximity to a very large, production- and cost-conscious steel industry in the United States. This growth, based to a large degree on imported raw materials, has been achieved with relatively minor government influence or help except in the area of tariffs, which are not high. The main stimulant to its establishment and growth has been markets rather than resources. The presence of water, rail and land transport facilities for the assemblage of raw materials and distribution of steel products is of very great importance. A favorable investment climate is essential to progress in any country's industrial growth. This factor coupled with a desire to increase one's standard of living and improve an area's economic position and well-being is probably the most important means towards industrial growth, particularly in a basic industry such as the manufacture of iron and steel and their products.

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